

**REMARKS****Status of the Claims***Pending Claims*

Claims 1, 14, 15, 33, 35, 42-45, 48, 49, 51, 54, 56, 58, 87, 106, 107, 111, 113, 116, 138, 143, 174, 175, 177, 182, 184, 187-190, 207, 208, and 215-231 are pending. Claims 42, 51, 54, 56, 58, 106, 107, 111, 113, 116, 138, 143, 174, 175, 177, 182, 184, 187, 190, 208, 215, 216, 219-224, and 229-231 are withdrawn from consideration as being drawn to a non-elected invention. Accordingly, after entry of the instant amendment, claims 1, 14, 15, 35, 43-45, 48, 49, 87, 188-189, 207, 217, 218, and 225-228 will be pending and under examination.

*Allowable Claims*

Applicants thank the Examiner for noting that Claim 189 is allowed.

**Support for the Claim Amendments**

The specification sets forth an extensive description of the invention in the amended claims. Accordingly, Applicants respectfully submit that no new matter is introduced by the instant amendment.

**Drawings**

Applicants submit herewith the fee set forth in 37 CFR 1.17(h) for the petition to accept color drawings filed under 37 C.F.R. § 1.84(a)(2).

**Claim Objections**

Claim 188 is objected to because the status identifier of the claim is incorrect. The instant amendment addresses this issue.

Claim Rejections – 35 USC §112, first paragraph,*Written Description*

Claims 1, 14, 15, 35, 43-45, 48, 49, 87, 188, 217, 218, and 225-228 are rejected under 35 U.S.C 112, first paragraph, as failing to comply with the written description requirement, as set forth in detail on pages 4-6 of the OA.

The instant amend addresses this issue. For example, the claims as amended are directed to a nucleic acid sequence at least 95% identical to SEQ ID NO:29, wherein the nucleic acid encodes a fluorescent polypeptide of SEQ ID NO:30. Therefore, one of ordinary skill in the art would be able to ascertain the scope of the claims with reasonable clarity and recognize that Applicants' were in possession of the claimed invention at the time of filing.

Accordingly, Applicants respectfully submit that the pending claims meet the written description requirement under 35 USC §112, first paragraph, and the rejection may be properly withdrawn

*Enablement*

Claims 1, 14, 15, 35, 43-45, 48, 49, 87, 188, 207, 217, 218, and 225-228 are rejected under 35 U.S.C 112, first paragraph, as failing to comply with the enablement requirement, as set forth in detail on pages 6-10 of the OA.

The Office acknowledges that the specification is enabling for an isolated polynucleotide of SEQ ID NOS:29, and a sequence (e.g. SEQ ID NO:17) that shares 95% sequence identity to SEQ ID NO:29, both encoding fluorescent polypeptides. However, the Office alleges that the specification does not provide enablement for any isolated polynucleotide having at least 95% sequence identity with an isolated polynucleotide of SEQ ID NO:29 encoding a fluorescent polypeptide. The instant amendment addresses this issue by amending the claims to describe a nucleic acid 95% identical to SEQ ID NO:29 encoding a fluorescent protein as set forth in SEQ ID NO: 30. Therefore a person skilled in the art would be able to make and use the invention commensurate in scope with these claims.

Accordingly, Applicants respectfully request that the rejection under section 112, first paragraph be withdrawn.

**CONCLUSION**

In view of the above, claims in this application after entry of the instant amendment are believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections of the claims and to pass this application to issue.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. **50-0661** referencing docket no. **D1410-2US**. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: December 22, 2010

Respectfully submitted,

By: /Brian W. Siddons/  
Brian W. Siddons  
Registration No.:62,776  
Intellectual Property Department  
VERENIUM CORPORATION  
PO BOX 910550  
San Diego CA 92121-0550  
Phone: 858-526-5296  
Email: [brian.siddons@verenium.com](mailto:brian.siddons@verenium.com)